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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,418	11/28/2003	David D. Bohn	003797.00688	7390

28319 7590 10/13/2006

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/722,418	Applicant(s) BOHN ET AL.	
	Examiner Jennifer T. Nguyen	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/28/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 9, 11, 12, 18, 19, 24, 25, 29, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Yang et al. (Patent No. US 7,098,894).

Regarding claim 1, Yang teaches a computer input device (i.e., pen-type optical mouse, figs. 15 and 19) configured to rest on a supporting surface (20), comprising:

a housing (45) having a lower periphery (i.e., lower part of pen-type optical mouse); and
an image projection system (20, 31-33) configured to display an image on the supporting surface (20) adjacent to and outside of the lower periphery when the computer input device is resting on the supporting surface (col. 14, lines 45-54).

Regarding claim 2, Yang teaches the image projection system is substantially contained within the housing (figs. 15 and 19).

Regarding claims 9 and 11, Yang teaches the computer input device is a mouse (col. 14, lines 45-54).

Regarding claim 12, Yang teaches the image includes an edge adjacent to the lower periphery, and wherein the image projection system is configured and oriented so that the

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adjacent edge of the image is within 1 mm and 25 mm from the lower periphery (figs. 15 and 19).

Regarding claim 18, Yang teaches computer input device includes a motion detecting system (14, fig. 15).

Regarding claim 19, Yang teaches an aperture (50) in the housing (45), and wherein an optical path defined between a light source and the displayed image extends through the aperture (fig. 15).

Regarding claim 24, Yang teaches a computer mouse (i.e., pen-type optical mouse, figs. 15 and 19) comprising:

- a housing (45);
- a plurality of actuators (17, 18, fig. 4);
- a motion detecting system (14) for determining relative movement of the mouse; and
- an optical projection system including a light source (11) and a movable image forming element (31-33) located within the housing (col. 14, lines 45-54).

Regarding claim 25, Yang teaches the mouse is configured to rest on a supporting surface and the optical projection system is configured to project an image onto the supporting surface (figs. 15 and 19).

Regarding claim 29, Yang teaches a method of notifying a user of an occurrence via a computer peripheral device configured to project images, the method including the steps of:

- projecting a first image (i.e., at first position of the mouse device) onto a display region (20); and

upon a predetermined condition associated with a computer program, projecting a second image (i.e., moving to a second position of the mouse device), different from the first image, onto the display region (col. 8, lines 27-39).

Regarding claim 30, Yang teaches the display region is in an area adjacent a housing periphery of the computer peripheral device such that the projecting steps include projecting the first and second images onto a supporting surface adjacent the housing periphery (col. 14, lines 45-54).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-8, 13-17, 20-23, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (Patent No. US 7,098,894) in view of Liu (Patent No. US 6,133,907).

Regarding claim 3, Yang teaches the image projection system includes a light source (11) and a lens (31) (col. 14, lines 45-54).

Liu teaches a light blocker (23, fig. 2) having a light transmissive portion and a light blocking portion (col. 2, lines 22-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the light blocker as taught by Liu in the system of Yang in order to provide pointing device with different purposes, for example, for advertisements or purposes of fashion.

Regarding claim 4, Yang teaches the image projection system further includes a mirror (32) disposed in a light path between the light source and the displayed image.

Regarding claims 5, 7-8, and 26, the combination of Yang and Liu teaches the light blocker (23) is optically located between the light source (24) and the lens (16) (fig. 2 of Liu).

Regarding claim 6, Yang teaches the lens (31) creates a focal point for the displayed image located substantially on the supporting surface (20) (col. 14, lines 45-54).

Regarding claim 13, the combination of Yang and Liu teaches multiple predetermined image forming devices disposed within the housing, each image forming device producing a different displayed image (col. 2, lines 22-39 of Liu).

Regarding claims 14-16, the combination of Yang and Liu teaches comprising a device (21 and 22) for moving the image forming devices relative to an optical path (col. 2, lines 22-39 of Liu).

Regarding claim 17, the combination of Yang and Liu teaches computer input device is a pointing device (col. 2, lines 22-39 of Liu).

Regarding claim 20, the combination of Yang and Liu teaches the image projection system includes a laser (col. 2, lines 22-40 of Liu).

Regarding claims 21 and 22-23, the combination of Yang and Liu teaches the computer input device is packaged as a kit with multiple replaceable image forming devices (col. 2, lines 22-40 of Liu).

5. Claims 10 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (Patent No. US 7,098,894) in view of Liu (Patent No. 6,133,907) and further in view of Wu (Patent No. 6,882,331).

Regarding of claims 10 and 27-28, the combination of Yang and Liu differs from claims 10 and 27-28 in that it does not specifically teach the image projecting system includes an active LED matrix.

Wu teaches an image projecting system includes an active LED matrix (col. 2, lines 40-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the LED matrix as taught by Wu in the system of the combination of Yang and Liu in order to provide a projecting system with low energy consumption.

6. The prior art made of record and not relied upon is considered to pertinent applicant's disclosure. US 6,489,934 and US 6,249,998.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen
10/5/06



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
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